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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/531,436	UGA ET AL.	
	Examiner	Art Unit	
	JOSHUA SMITH	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/03/2009 has been entered.

- **Claims 12-19 are pending.**
- **Claims 1-11 and 20-22 are cancelled.**
- **Claims 12-19 stand rejected.**

Claim Objections

Claim 12 is objected to because of the following informalities: Claim 12 states "a unit that searches LSDBs **using TCAM**" (emphasis added), where it appears that there should be an article "a" between "using" and "TCAM". Appropriate correction is required.

Claim 16 is objected to because of the following informalities: Claim 16 states "a function that searches LSDBs **using TCAM**" (emphasis added), where it appears that

there should be an article "a" between "using" and "TCAM". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 12 states "**a unit** that searches **LSDBs** using **TCAM**" (emphasis added). The specification does not adequately disclose **a single** "unit" that searches **multiple** "LSDBs" using **a single** "TCAM", in such a manner that one skilled in the art at the time of the invention could make and use the claimed invention.

Claims 13-15 are rejected through dependence from Claim 12.

Claim 16 states "**a function** that searches **LSDBs** using **TCAM**" (emphasis added). The specification does not adequately disclose **a single** "function" that

searches **multiple** "LSDBs" using **a single** "TCAM", in such a manner that one skilled in the art at the time of the invention could make and use the claimed invention.

Claims 17-19 are rejected through dependence from Claim 16.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 states "**a unit** that searches **LSDBs** using **TCAM**" (emphasis added). This is indefinite since it is unclear how **a single** "unit" searches **multiple** "LSDBs" using **a single** "TCAM". Examiner will treat the above excerpt to indicate that ***a unit searches a LSDB among a plurality of LSDBs using a TCAM***.

Claims 13-15 are rejected through dependence from Claim 12.

Claim 16 states "**a function** that searches **LSDBs** using **TCAM**" (emphasis added). This is indefinite since it is unclear how **a single** "function" searches **multiple** "LSDBs" using **a single** "TCAM". Examiner will treat the above excerpt to indicate that ***a function searches a LSDB among a plurality of LSDBs using a TCAM***.

Claims 17-19 are rejected through dependence from Claim 16.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamichi et al. (Pub. No.: US 2002/0085498 A1) in view of Basu et al. (Pub. No.: US 2004/0100950 A1) and Rau (Patent Number: 5,515,370), hereafter respectively referred to as Nakamichi, Basu, and Rau.

In regard to Claim 12, Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, a input-side router (item 11S, FIG. 2) containing a link state database (item 32a, FIG. 2) and a processing unit (item 30, FIG. 2) involved in the transmission and reception of packets, and in the generation, transmission and reception of opaque LSAs of the OSPF protocol (a link state database

search unit provided in an interface that processes a packet input via an input channel, provided in a packet transfer device, and a collecting unit that collects received information using a control packet of a routing protocol).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region (a unit that stores at least a portion of items in a received information collected, and a unit compares stored information and information of newly received information collected to determine whether the newly received information is new or old).

Nakamichi fails to teach a unit that searches a database using a TCAM.

Basu also teaches in paragraphs [0021], [0028] and [0029], and in FIG. 1, Sheet 1 of 10, TCAMs are an attractive technology for packet-based network lookup operations, such as IP route lookups in which a destination address of an incoming packet is matched with the "longest matching prefix" in a routing table database (a unit that searches a database), and Basu teaches a system where a TCAM (item 15, FIG. 1) contains sub-table ID information based on hashing bits of packet headers from incoming packets, and a resulting match from TCAM may then be used to index in SRAM (item 16, FIG. 1) (searching a database using a TCAM) containing "next hop"

information for use in routing a given data packet (a unit that searches a database using a TCAM).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Basu with the invention of Nakamichi since Basu provides a TCAM-based architecture for IP lookups tasks to take advantage of a selective addressing feature to provide more power efficient forwarding engines and to take advantage of the easier management and updating of TCAM-based tables (see Basu, paragraphs [0002] and [0004]), which can be introduced into the system of Nakamichi to allow utilization of power efficient TCAMs so that link state databases to be easier to manage and update without increasing power consumption.

Nakamichi fails to teach a unit in an interface searches a database among a plurality of databases using a CAM.

Rau teaches in column 1, and in FIG. 1, line units (AU1 to AUn) have a memory system comprising a content addressable memory (CAM) and a random access memory (RAM) (a plurality of databases) following the CAM, where content addressable memory is input with identifier information of a cell header of a respective message cell, and given a presence of a match with one of stored identifier information items, a random access memory is supplied with a memory address corresponding to this match, and based on this criterion an information required for the forwarding of a respective message cell is offered proceeding from the random access memory (a unit in an interface searches a database among a plurality of databases using a CAM).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Rau with the invention of Nakamichi since Rau provides a way how a circuit arrangement for line units of an ATM switching equipment unit can be designed in order to selectively allocate different memory addresses and, thus, selectively allocate different information stored in the write/read memory for the forwarding of the respective message cell to an identifier information supplied to the content-addressable memory, and where the advantage of this arrangement is that, on the basis of a second prioritization undertaken alternatively to or in addition to the first prioritization, for one or more identifier information items stored in the content-addressable memory, specific virtual paths of a defined path group that is identified by a defined plurality of more significant bits of the corresponding path identifier can be branched off from this path group, and thus, can be forwarded via a route deviating from the route of the path group (see Rau, column 1, lines 25-32, and column 2, lines 40-49), which can be introduced into the system of Nakamichi to allow more efficient utilization and processing of VPIs/VCIs in the ATM system of Nakamichi.

In regard to Claim 13, as discussed in the rejection of Claim 12, Nakamichi in view of Basu and Rau teaches an LSDB search unit in an interface.

Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, a input-side router (item 11S, FIG. 2) containing a link state database (item 32a, FIG. 2) and a processing unit (item 30, FIG. 2) involved in the transmission and reception of packets, and in the generation, transmission and reception of opaque

LSAs of the OSPF protocol (a newly arrived packet containing newly received information, a comparing unit).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region (newly received information is newer than information stored based on a decision made by a comparing unit, discarding newly arrived control packet containing newly arrived information when the information is older than the information stored).

Nakamichi also teaches in paragraphs [0050] and [0051], each router exchanges information of each LSP in each link using opaque LSA of OSPF, and each router can propagate the opaque LSA(s) (transferring a newly arrived control packet containing newly received information to a routing device).

In regard to Claim 14, as discussed in the rejection of Claim 12, Nakamichi in view of Basu and Rau teaches an LSDB search unit in an interface.

Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, a input-side router (item 11S, FIG. 2) containing a link state database (item 32a, FIG. 2) and a processing unit (item 30, FIG. 2) involved in the transmission

and reception of packets, and in the generation, transmission and reception of opaque LSAs of the OSPF protocol (a newly arrived packet containing newly received information, a comparing unit).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region (newly received information is newer than information stored based on a decision made by a comparing unit).

Nakamichi also teaches in paragraphs [0050], [0051] and [0053], and in FIG. 2, each router exchanges information of each LSP in each link using opaque LSA of OSPF, and each router can propagate the opaque LSA(s), and where a transferring router 11R (FIG. 2) and output-side router 11D (FIG. 2) have the same configuration as the input-side router 11S (FIG. 2) (transferring information of item in a control packet that has been transferred to a routing device, and transferring a newly arrived control packet containing newly received information to a routing device to an LSDB search unit in another interface).

In regard to Claim 15, as discussed in the rejection of Claim 12, Nakamichi in view of Basu and Rau teaches an LSDB search unit in an interface.

Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, a input-side router (item 11S, FIG. 2) containing a link state database (item 32a, FIG. 2) and a processing unit (item 30, FIG. 2) involved in the transmission and reception of packets, and in the generation, transmission and reception of opaque LSAs of the OSPF protocol (a newly arrived packet containing newly received information, a comparing unit).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region (newly received information is newer than information stored based on a decision made by a comparing unit).

Nakamichi also teaches in paragraphs [0050] and [0051], each router exchanges information of each LSP in each link using opaque LSA of OSPF, and each router can propagate the opaque LSA(s), and, in paragraph [0111], and in FIG. 7, Sheet 7 of 12, after a database update process (step item S30, FIG. 7), step item S32 (FIG. 7) occurs

in which the received opaque LSA is transmitted (flooded) to all other links (a unit stores information in a control packet that is transferred from another unit).

In regard to Claim 16, Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, an input-side router (item 11S, FIG. 2) containing a program stored in an internal memory, a link state database (item 32a, FIG. 2), and a processing unit (item 30, FIG. 2) involved in the transmission and reception of packets, and in the generation, transmission and reception of opaque LSAs of the OSPF protocol (a storage medium having a computer program used in a link state database search unit provided in an interface that processes a packet input via an input channel, provided in a packet transfer device, and a function that collects received information using a control packet of a routing protocol).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region (a function that stores at least a portion of items in a received information collected, and a function that compares stored information and information of newly received

information collected to determine whether the newly received information is new or old).

Nakamichi fails to teach a function that searches a database using a TCAM.

Basu also teaches in paragraphs [0021], [0028] and [0029], and in FIG. 1, Sheet 1 of 10, TCAMs are an attractive technology for packet-based network lookup operations, such as IP route lookups in which a destination address of an incoming packet is matched with the "longest matching prefix" in a routing table database (a unit that searches a database), and Basu teaches a system where a TCAM (item 15, FIG. 1) contains sub-table ID information based on hashing bits of packet headers from incoming packets, and a resulting match from TCAM may then be used to index in SRAM (item 16, FIG. 1) (searching a database using a TCAM) containing "next hop" information for use in routing a given data packet (a function that searches a database using a TCAM).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Basu with the invention of Nakamichi since Basu provides a TCAM-based architecture for IP lookups tasks to take advantage of a selective addressing feature to provide more power efficient forwarding engines and to take advantage of the easier management and updating of TCAM-based tables (see Basu, paragraphs [0002] and [0004]), which can be introduced into the system of Nakamichi to allow utilization of power efficient TCAMs so that link state databases to be easier to manage and update without increasing power consumption.

Nakamichi fails to teach a function in an interface searches a database among a plurality of databases using a CAM.

Rau teaches in column 1, and in FIG. 1, line units (AU1 to AUn) have a memory system comprising a content addressable memory (CAM) and a random access memory (RAM) (a plurality of databases) following the CAM, where content addressable memory is input with identifier information of a cell header of a respective message cell, and given a presence of a match with one of stored identifier information items, a random access memory is supplied with a memory address corresponding to this match, and based on this criterion an information required for the forwarding of a respective message cell is offered proceeding from the random access memory (a function in an interface searches a database among a plurality of databases using a CAM).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Rau with the invention of Nakamichi since Rau provides a way how a circuit arrangement for line units of an ATM switching equipment unit can be designed in order to selectively allocate different memory addresses and, thus, selectively allocate different information stored in the write/read memory for the forwarding of the respective message cell to an identifier information supplied to the content-addressable memory, and where the advantage of this arrangement is that, on the basis of a second prioritization undertaken alternatively to or in addition to the first prioritization, for one or more identifier information items stored in the content-addressable memory, specific virtual paths of a defined path group that is identified by a

defined plurality of more significant bits of the corresponding path identifier can be branched off from this path group, and thus, can be forwarded via a route deviating from the route of the path group (see Rau, column 1, lines 25-32, and column 2, lines 40-49), which can be introduced into the system of Nakamichi to allow more efficient utilization and processing of VPIs/VCIs in the ATM system of Nakamichi.

In regard to Claim 17, as discussed in the rejection of Claim 16, Nakamichi in view of Basu and Rau teaches an LSDB search unit in an interface.

Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, a input-side router (item 11S, FIG. 2) containing a link state database (item 32a, FIG. 2) and a processing unit (item 30, FIG. 2) involved in the transmission and reception of packets, and in the generation, transmission and reception of opaque LSAs of the OSPF protocol (a newly arrived packet containing newly received information, a comparing function).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region (newly received information is newer than information stored based on a decision made

by a comparing function, discarding newly arrived control packet containing newly arrived information when the information is older than the information stored).

Nakamichi also teaches in paragraphs [0050] and [0051], each router exchanges information of each LSP in each link using opaque LSA of OSPF, and each router can propagate the opaque LSA(s) (transferring a newly arrived control packet containing newly received information to a routing device).

In regard to Claim 18, as discussed in the rejection of Claim 16, Nakamichi in view of Basu and Rau teaches an LSDB search unit in an interface.

Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, a input-side router (item 11S, FIG. 2) containing a link state database (item 32a, FIG. 2) and a processing unit (item 30, FIG. 2) involved in the transmission and reception of packets, and in the generation, transmission and reception of opaque LSAs of the OSPF protocol (a newly arrived packet containing newly received information, a comparing function).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region

(newly received information is newer than information stored based on a decision made by a comparing function).

Nakamichi also teaches in paragraphs [0050], [0051] and [0053], and in FIG. 2, each router exchanges information of each LSP in each link using opaque LSA of OSPF, and each router can propagate the opaque LSA(s), and where a transferring router 11R (FIG. 2) and output-side router 11D (FIG. 2) have the same configuration as the input-side router 11S (FIG. 2) (transferring information of item in a control packet that has been transferred to a routing device, and transferring a newly arrived control packet containing newly received information to a routing device to an LSDB search function in another interface).

In regard to Claim 19, as discussed in the rejection of Claim 16, Nakamichi in view of Basu and Rau teaches an LSDB search unit in an interface.

Nakamichi teaches in paragraphs [0050] and [0053] through [0055], and in FIG. 2, Sheet 2 of 12, a input-side router (item 11S, FIG. 2) containing a link state database (item 32a, FIG. 2) and a processing unit (item 30, FIG. 2) involved in the transmission and reception of packets, and in the generation, transmission and reception of opaque LSAs of the OSPF protocol (a newly arrived packet containing newly received information, a comparing function).

Nakamichi also teaches in paragraphs [0141] and [0142], and in FIG. 11, Sheet 11 of 12, in step item S110 (FIG. 11), it is determined if an opaque LSA in a OLDB structure is up-to-date, and if an opaque LSA is up-to-date, this up-to-date OLDB

structure is exchanged for an old OLDB structure which has already existed in the database (step item S114, FIG. 11) and the OLDB structure with the up-to-date LSA is inserted into this position, but if an opaque LSA is not up-to-date, the received opaque LSA is discarded (step item S112, FIG. 11) and is not inserted into the database region (newly received information is newer than information stored based on a decision made by a comparing function).

Nakamichi also teaches in paragraphs [0050] and [0051], each router exchanges information of each LSP in each link using opaque LSA of OSPF, and each router can propagate the opaque LSA(s), and, in paragraph [0111], and in FIG. 7, Sheet 7 of 12, after a database update process (step item S30, FIG. 7), step item S32 (FIG. 7) occurs in which the received opaque LSA is transmitted (flooded) to all other links (a function stores information in a control packet that is transferred from another function).

Response to Arguments

I. Arguments for the Advisory Action, Continuation of 3

Applicants submit that the statement made by the examiner that ***the amendments to Claims 12 and 16 change the scope of the claims and require further consideration and/or search*** is incorrect, and, therefore, the addition of "a unit that searches LSDBs using TCAM" is not new matter in claims 12 and 16. Examiner respectfully notes that the advisory action states **only** that the amendment changes the scope of the claims and requires further consideration and/or search, and **does not** attempt to convey that the amendment is new matter. However, **this action does**

present rejections under 35 USC 112, first paragraph, stating that the amendment is failing to comply with the written description requirement (Please refer to the above rejections made under 35 USC 112, first paragraph).

II. Arguments for Claim Rejection Under 35 USC § 102

Applicant's arguments filed 03/03/2009 have been fully considered but they are not persuasive. Applicant submits that the "interface" used as the input-side router 11S of Nakamichi mentioned by the Examiner should be interpreted in a broad sense based on its action or role like the interface in a configuration of an input-side router shown in FIG. 2 of Nakamichi, and, as such, the "interface" used as the input-side router 11S indicated by the Examiner is definitely different from the "interface devices" represented by No. 41-47 in FIG. 2 of Nakamichi., and that the "interface" in Applicants' present invention indicates the "interface device (s)" itself. Examiner respectfully disagrees this is sufficient for the withdrawal of the rejections of Applicants' claims. Although Applicants' disclosure may suggest that an "interface" of Applicants' invention corresponds to ***interface devices*** represented by No. 41-47 in FIG. 2 of Nakamichi, such a feature is not clearly claimed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- **Bachmutsky (Pub. No.: US 2002/0131432 A1)** teaches in paragraph [0030], a same index for a location in a TCAM table is used to point to a corresponding location in the memory.
- **Cheriton (Patent No.: US 7,002,965 B1)** teaches that TCAMs produce an index which is used by classification memory to return an entry that provides indications on forwarding, policing and/or other packet classification indications.
- **Desanti (Patent No.: US 7,095,738 B1)** teaches that each row of a TCAM specifies a pointer to a respective row or entry of an adjacency table.
- **Maeno (Pub. No.: US 2002/0118647 A1)** teaches in paragraph [0050], When a path controller receives a path setup message (step 601), it searches a link state database 23 for links that are available along possible routes to a destination node specified in the setup message (step 602).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA SMITH whose telephone number is (571)270-1826. The examiner can normally be reached on Monday-Friday, 10:30am-7pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571)272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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